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ABSTRACT

Meaning and knowledge are separate constructs. Meaning is an idiosyncratic, cognitive construct; knowledge is a social construct built upon various shared meanings that are reconstructed and judged to be accurate or probable by a particular community. Language is the medium through which both meaning and knowledge are formed. Instructors can better prepare the developmental student for academic success if they (1) understand the epistemological role that language (particularly writing and reading) plays in the making of meaning and the construction of knowledge; (2) understand, and act upon, the distinctions between meaning and knowledge; and (3) engage the student in verbal behavior that fosters the construction of meaning and knowledge. There is a theoretical base for making language (and its study) the essential agent in the generation of thought and meaning and also the "sine qua non" of knowledge construction and reification. There are also strategies that can be used to engage students (and instructors) in the creation of meaning and the negotiation of knowledge, such as calling up relevant prior knowledge, constructing relationships among parts of the whole, and monitoring and revising understanding--all essential to making meaning. These epistemological uses of language can empower developmental students to become early and full participants in the academic community. (Two figures are included, and 62 references are appended.) (Author/MS)

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Language, Meaning, and Knowledge: Empowering Developmental Students to Participate in the Academy

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Abstract

Meaning and knowledge, we suggest, are separate constructs. Meaning is an indiosyncratic, cognitive construct; knowledge is a social construct built upon various shared meanings that are reconstructed and judged to be accurate or probable by a particular community. Language is the medium through which both meaning and knowledge are formed. The first half of our paper presents theoretical bases for making language (and its study) the essential agent in the generation of thought and meaning and also the sine qua non of knowledge construction and reification. The second half of the paper presents strategies that can be used to engage students (and instructors) in the creation of meaning and the negotiation of knowledge. Such epistemological uses of language can empower developmental students to become early and full participants in the academic community.

Language, Meaning, and Knowledge:

Empowering Developmental Students to

Participate in the Academy

> "Language is for using, and the uses of language are so varied, so rich, and each use so preemptive a way of life, that to study it is to study the world and, indeed, all possible worlds." (Bruner, 1983)

As Bruner (1983) points out, effective use and study of language invests students with a power to shape and know the world. College students in particular are immersed in knowledge-empowering uses of language, and their success depends in no small way on their command of language. Developmental studies students, however, typically lack mastery of language in its broader uses and so also its attendant power, a want that undermines these students' academic assimilation and success.

Essential to developmental students' success in the academic community is their ability to use language in ways that enhance the generation of, reflection on, and revision of thought. They need to learn more effective methods of, and to receive directed practice in, using language to increase their understanding of course content. They need to understand not just the texts and lectures they encounter, but also the contexts into which their new understanding fits. They need to learn how to construct and demonstrate knowledge within and for a host of academic communities. As Bartholomae (1986) reminds us, "Every time a student sits down to write for us, he has to invent the university for

the occasion -- invent the university, that is, or a branch of it, like history or anthropology or economics or English" (p. 4). It is through such invention that knowledge, as opposed to meaning or understanding, is constructed.

We use the words meaning and knowledge in a special sense. By meaning (or understanding) we refer to the product of the mind's attempt to make order out of chaos, to forge connections between new experience or content and prior experience or knowledge. By knowledge we refer to a set of beliefs held or tested by a community of people who are in some way peers (fellow scientists, fellow Americans, fellow students in American History 151). Meaning is a cognitive construct; knowledge is a social construct built upon various meanings reconstructed and reified by a particular community.

This distinction between understanding and knowledge has implications for what we teach and expect of our developmental students. Students in a reading or study-skills course, for instance, may learn how to look for the major causes of the Mexican War in their textbooks. They may also learn how to take efficient notes on Professor Nelson's lecture on causes of the Mexican War. Some of Professor Nelson's causes may be the same ones given in the textbook, but other points may receive less or greater emphasis, and still other causes may go unmentioned in the text. What do these students do when asked on a midterm exam to analyze and evaluate the chief causes of the Mexican War and subsequent effects on American territorial laws? Will they be prepared to compare and synthesize authoritative evidence? Or take the example of a developmental writing student who can write a five-paragraph essay, but

is unable to place her or his ideas within a purposeful context outside her own idiosyncratic experience -- or is unaware of the importance for doing so.

In each case, the students understand, to a degree, what they have been taught to do -- to read purposefully, to take notes accurately, to organize written information. But unless the students are also shown the importance of fitting into a larger context the information they have at their fingertips, and how to do so, they will still be under-prepared to participate fully in the academic community.

Instructors can better prepare the developmental student for academic success if they (1) understand the epistemological role that language (particularly writing and reading) plays in the making of meaning and the construction of knowledge, (2) understand, and act upon, the distinctions between meaning and knowledge, and (3) engage the student in verbal behavior that fosters the construction of meaning and knowledge.

We will explore each of these three points in turn. The first half of our discussion lays the theoretical groundwork implicit in points (1) and (2). The second half presents both research-proven and traditionally accepted strategies for promoting the construction of meaning and knowledge.

THE EPISTEMOLOGICAL FUNCTION OF LANGUAGE

The Making of Meaning

E. M. Forster's oft-quoted question is perhaps the simplest assertion of the epistemological function of written language: "How do

I know what I think until I see what I say?" (quoted in Mayher, Lester, & Pradl, 1983, p. 36). The question suggests two ways that language contributes to understanding and knowledge.

Most obviously, the question focuses on the product of writing (i.e., the text) as an embodiment of evolving thought (Emig, 1977). The written text allows both the reader and the writer to examine thoughts captured in time and recorded in words, thereby encouraging more complex thought by abolishing constraints imposed by long- and short-term memory (Dowst, 1980).

But the act of writing also contributes to thinking in a more direct and essential way. To return to Forster's quotation: "How I know," "what I think," and "what I say" even (or especially) in their grammatical syntax suggest the symbiotic relation between product ("what") and process ("know," "think," "say"), a relation mediated by consciousness ("I") through language. Berthoff (1981) aptly describes the epistemological nature of the composing process when she explains that "It is the discursive character of language, its tendency to 'run along,' to be syntactical, which brings thought along with it" (p. 70). And it is "our manipulation of language," Dowst (1980) argues, that "shapes our conceptions of the world and of our selves" (p. 69).

In Thought and Language (1962) Vygotsky explores the preeminent role that language plays in thinking and meaning-making. According to Vygotsky, language is not the same as thought, nor does language actually create thought; rather, thought evokes meaning which in turn finds embodiment in words. Thought and meaning exist independently of language, but the search for "the word" brings thought and meaning to consciousness and thus makes them malleable.

Like Berthoff and Dowst, Vygotsky also emphasizes the symbiotic relation between the process and product of verbal composition: "The relation between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing, and a thought unembodied in words remains a shadow" (p. 153). Words uttered without reference to impelling thought carry no meaning, and thought unembodied in words at best remains a "felt sense" (Perl 1980, p. 365), a vague sentience without form, empty of meaning. Language gives meaning form, which the conscious mind shapes to its various purposes.

Vygotsky concludes Thought and Language by reemphasizing the importance of language in the development of thought and, equally importantly, by placing the development of language firmly within the evolutionary development of human consciousness. The epistemological import of language is inescapable: One's ability to manipulate language (as a speaker, listener, writer, or reader) determines in large part how and what one knows.

The Construction of Knowledge

Other theories of how knowledge and meaning are created take us beyond the consciousness of a single, individual language user and into a distinction between meaning (or understanding) and knowledge. The crux of that distinction is that understanding derives from a personal response captured in language, whereas knowledge arises from a socially interactive process carried out through language. Reader response theory (Bleich, 1975, 1978, 1986; Flynn, 1983; Petrosky, 1982), transactive theory (Rosenblatt, 1978), and social construction theory

(Bruffee, 1986; Brandt, 1986; Trimbur, 1985) all advocate that knowledge arises from interactions involving language, a language user (and her prior experience), a text, an audience, and a context. Hence, knowledge is constructed within and is determined by a social context.

In explaining the connection among social construction theory, language, and knowledge, Bruffee (1986) points out that knowledge (and thus reality) is created by, promulgated by, and revised by a community of like-minded members. As a "social artifact," knowledge "is what together we agree it is" through participating "in a process of socially justifying belief. . . . [Knowledge] is the product of human beings in a state of continual negotiation or conversation" (Bruffee, 1984, pp. 646-47). Language is the medium through which such knowledge is consciously thought about, communicated, and reified. In turn, that knowledge, codified in words, shapes the culture that possesses it.

Bruffee (1984) also explains how the inter-personal process of knowledge creation can occur intra-personally (i.e., reflectively) in a way similar to carrying on a conversation with oneself, a way imitative of social conversation. To understand this process we need to understand first Vygotsky's (1962) theory of the development of thought as it evolves from egocentric speech to inner speech.

The primary function of speech is communicative or social, and the earliest use of language is a social one (Vygotsky, 1962). Unlike Piaget's description of egocentric speech as self-directed and nonsocial, Vygotsky's conception of egocentric speech holds that it emerges "when the child transfers social, collaborative forms of behavior to the sphere of inner-personal psychic functions" (p. 19). In

egocentric speech, the child often stops to think aloud, conversing with himself as he has done with others. Egocentric speech leads developmentally to what Vygotsky calls "inner speech" -- i.e., "thinking in pure meanings" (p. 149). Egocentric speech and unvoiced inner speech are both processes of reflection modeled on social, interactive speech acts. Vygotsky, no doubt, would agree with Bruffee (1984) that "because thought is interalized conversation, thought and conversation tend to work largely in the same way" (p. 639). On the basis of the similarities between public conversation or publication (through which knowledge is constructed and reified) and internalized conversation (through which knowledge is temporarily constructed but not externally reified as artifact), Bruffee (1983, 1984) builds his case for collaborative learning, which provides "a context in which students can practice and master the normal discourse exercised in established knowledge communities in the academic world and in business, government, and the professions" (1984, p. 644).

Above all, Bruffee (1986) is very clear about the epistemological function of language and the central role that reading and writing play in education: "The social constructionist . . . regards [knowledge and language] as inseparable. Placing language at the center of our understanding of knowledge and of the authority of knowledge, it thereby places reading and writing uniquivocally where . . . it [sic] belongs, at the center of the liberal arts curriculum and the whole educational process" (p. 778). Here again, the epistemological importance of language is paramount in that knowledge and the symbol system by which it is embodied are identical (Bruffee, 1986).

To summarize thus far, the models of learning we choose for our classrooms should be built upon epistemological foundations of language, meaning, and knowledge, foundations which give rise to four primary tenets. First, the act of meaning-making is a generative process, and so meaning is subject to elaboration and revision. Second, language is the primary (though not the only) medium through which thought and meaning are made conscious and malleable; thus, language allows thought to be thought about and revised. Third, meaning can be distinguished from knowledge in that meaning can be characterized as a cognitive construct and knowledge as both a cognitive and social construct. Fourth, language embodies knowledge, thus making knowledge and language essentially inseparable. Therefore, since language embodies thought and knowledge, as well as providing the means of reflecting on thought and knowledge, language is the very heart of knowing and learning.

The essential and unique charge of developmental educators makes imperative their commitment not just to develop students' skills in understanding new and unfamiliar concepts, but in creating situations and contexts in which understanding is examined, refined, and applied. The second half of our paper presents strategies that have proven effective in empowering students to become more able creators of meaning and knowledge.

SOME ACTIVITIES FOR CONSTRUCTING MEANING AND KNOWLEDGE

The processes of composing meaning and constructing knowledge cannot be as neatly divided as the discussion so far might suggest. Obviously,

a student with no understanding of the Mexican War can contribute little to the creation or revision of a class's knowledge about how that war influenced Thoreau's "Civil Disobedience." Conversely, because meaning-making depends on forging connections between new information and prior knowledge and experience, composing new meanings necessarily alters one's conceptual knowledge. That is, understanding "Civil Disobedience" may lead a student to revise her or his knowledge of the Mexican War or of Martin Luther King, Jr.'s, use of passive resistance.

Some instructional strategies, then, may develop both understanding and knowledge. Developmentally, though, according to the philosophical premises presented earlier, understanding generally precedes knowledge.

Activities to Encourage Meaning-Making

Strategies that foster understanding of course content should accomplish at least one of three goals. First, the activity should lead students to explore what they already know about a topic. Even if that understanding is minimal, it is important to help students construct a "web of meaning" (Vygotsky, 1962, p. 100) to which new information can be attached. For instance, our U. S. history student may know little about New Englanders' unpopular view of the Mexican War or about Thoreau's response to the war. But the student may have a sound understanding of Martin Luther King, Jr.'s, use of nonviolent resistance or of more recent unpopular views of the Vietnam War. So a valid foundation of conceptual knowledge may already be in place, ready to be activated and applied. Second, the activity should lead students to construct coherent interconnections among various parts of the whole

text, that is, constructing, storing, and relating what Kintsch and van Dijk (1976) call macrostructures and microstructures, or what are all too often referred to as Main Ideas and Details in college reading texts. Finally, the activity should lead students to monitor and revise the meaning they have constructed. Figure 1 lists activities that actuate these three goals.

Insert Figure 1 about here

Before attributing meaning to new material, students first need to determine what they already know about the topic at hand. Anticipation guides (Readence, Bean, & Baldwin, 1981) and prediction guides (Nichols, 1983), the SQ3R (Robinson, 1962) and PQ4R (Thomas & Robinson, 1977) strategies, the PReP procedure (Langer, 1981), the Node Acquisition and Integration Technique (Diekhoff, Brown, & Dansereau, 1982), and other strategies for evoking prior knowledge hasten and deepen students' understanding of new material. All of these activities, either by themselves or as tactics within overall strategies, call up from memory schemata to which new and unfamiliar information can be related and thus better understood.

Graphic organizers such as networking (Dansereau, 1978; Holley, Dansereau, McDonald, Garland, & Collins, 1979), mapping (Armbruster & Anderson, 1980; Buckley & Boyle, 1982; Dansereau, 1979; Hanf, 1971) and clustering (Rico, 1983) also engender engagement with text material as students build a coherent understanding of it. By emphasizing form and structure, graphic organizers encourage students to differentiate between superordinate and subordinate ideas in texts. They also force

students to construct relationships among parts of texts. Finally, they lead students to monitor the accuracy and completeness of their understanding of text content (Weinstein & Rogers, 1985).

Some of the most common activities for developing students' understanding and monitoring of content include underlining, highlighting, and annotating texts. But even these seemingly simple study activities can prove difficult for developmental students who have no method for their marking (Nist, 1987). And yet in order to lead students to carry on an internal dialogue between themselves and the text, instructors should encourage annotation and, equally importantly, provide feedback on the accuracy and fullness of annotations until students become adept at such internal dialogue.

Summarization has received probably most attention recently as a study strategy that leads students to differentiate between major and minor ideas and to monitor their understanding. Because it seems to be a developmental skill (Brown, Campione, & Day, 1981; Brown, Day, & Jones, 1983; Johnson, 1982; Winograd, 1984), careful training in summarizing can lead to enhanced memory of and in-depth processing of content material (Bretzing & Kuhlhavy, 1979; Brown & Day, 1983; Dansereau, McDonald, Long, Atkinson, Ellis, Collins, Williams, & Evans, 1974; Doctorow, Wittrock, & Marks, 1978; Pio & Andre, 1977). However, a potential drawback of the summary is that in its emphasis on major ideas to the diminution of details, summarization often leads students to ignore nuances or seemingly minor facts (King, Biggs, & Lipsky, 1984; Garner, 1982), the kind of information often asked for in literary

interpretations and multiple choice tests. Nevertheless, the summary requires that students be able to characterize in their own words a text's meaning.

A strategy that combines graphic organizing, self-monitoring, reflective thinking, and writing within an independent learning context is the PORPE strategy (Simpson, 1986; Simpson, Hayes, Stahl, Conner, & Weaver, 1988; Simpson, Stahl, & Hayes, 1987). By guiding students through a sequence of tactics including Prediction, Organization, Rehearsal, Practice, and Evaluation, PORPE both reflects and promotes the composing process of reading and writing described by Tierney and Pearson (1983). PORPE works as a synergistic study strategy wherein each activity builds onto and reinforces the others. The holistic process results in in-depth processing; active construction of meaning through mapping, question generation, and practice essay writing; monitoring of ongoing understanding of content and its superordinate and subordinate structure; and reflection on the learner's understanding in relation to expectations of what the instructor-examiner considers important (i.e., knowledge). In this final activity, PORPE leads students to consider how their understanding fits in with knowledge they will be expected to know for the course and for the community of knowledgeable authorities of whom they hope to become peers.

Calling up relevant prior knowledge, constructing relationships among parts of the whole, and monitoring and revising understanding -- these are all essential to making meaning. Language is the medium through which all this occurs, for until students can put into words their understanding, they have not yet understood.

Understanding, however, brings students only half-way on their quest for full enfranchisement in the social and political arena of knowledge construction.

Activities for Constructing Knowledge

Because knowledge construction stems primarily from social interaction, knowledge-empowering activities should be interactive; they should engage students and instructor directly and authentically in the negotiation of shared knowledge. Figure 2 lists activities that encourage knowledge construction.

Insert Figure 2 about here

Reader response theorist Bleich (1975, 1978), for instance, engages students in a process of "intersubjective negotiation" whereby the immediate community of readers discuss each other's personal responses to a literary text and collectively determine what can be known about it. The process Bleich describes can be adapted by teachers of almost any subject, but because reader response relies on students' subjective feelings, it lends itself most readily to uses in the humanities or social sciences. Instructors who are less familiar with reader response methods or who are less involved with the teaching of belles-lettres will find in Chase and Hynd (1987) an accessible introduction to the purpose and practice of reader response interaction in the developmental classroom.

Bruffee's (1972, 1983, 1984) collaborative learning method is more flexible and more easily adaptable than reader response interpretation.

But like reader response, collaborative learning stresses the process of negotiating and determining agreed-upon knowledge. Often students work in groups of three to six, each person sometimes taking on different but related tasks. As a small community, the group proposes, examines, analyzes, interprets, and synthesizes information and responses to it. The group may then present its knowledge to the larger class, at which point the negotiations and syntheses begin anew, mirroring the politics of knowledge construction outside the classroom in the "real world."

There are at least two potential problems with reader response and collaborative learning. Some developmental students believe they have nothing to contribute and so remain silent until called on, whereupon they may or may not feel they have something to offer to the group or class. A second problem may occur with developmental students who are all too eager to talk, but who are not yet practiced in the manners (politics) of friendly academic discussion. Activities that more formally direct students to think and act in ways that encourage both skepticism and acceptance of new ideas will often provide patterns of social interaction that students will feel more comfortable participating in.

Two such activities include role-playing and forensic discussion (Rubin & Dodd, 1987). In role-playing, students are assigned various roles and positions on issues. Students can even be given opening lines to focus and initiate oral discussion on the issue. In turn, students play out these roles, usually in small groups of three to four. The group interaction encourages students to look at issues with new eyes

from various vantage points. Forensic discussion in which teams of students are directed to argue first one position and later the opposite position teaches students the value of speaking for a position they might normally see in dualistic terms as either correct or incorrect, right or wrong. After each of these activities, students should be asked to write about the personal issues and factual evidence that the classroom community argued and negotiated.

So far we have described group activities that place the student directly within a community of voices and minds. But Vygotsky's (1962) theory of inner speech and Bruffee's (1984) characterization of thought as "internalized conversation" (p. 639) suggest that a close approximation of knowledge construction can take place in the individual mind through a process modeled on social conversation. Such thinking requires reflection, objectivity, and what Berthoff (1981) often refers to as dialectic. This kind of objectivity is especially difficult for developmental students, who generally see truth and knowledge dualistically (Perry, 1970).

Berthoff (1981) offers one of the most effective methods of encouraging the kind of internal dialogue that approximates knowledge construction. Her method is the double-entry notebook. On the left-hand pages students record notes, quotations, figures, and other information that captures the gist of the text they are reading. On the right-hand pages, opposite the notes, students respond to what they have read and written; they make "notes about notes" (p. 45), they think about thought, they agree and disagree with the author and her or his ideas, style, persona. The teacher, of course, should model the

dialectical process for students initially. The teacher should also read the notebooks, at first anyway, to make suggestions for further dialogue or, better yet, to enter into a three-way dialogue among author, student, and teacher. Students might even share their notebooks and enter into four-way or fourteen-way conversations.

These kinds of activities move students from narrowly subjective and egocentric positions to vantage points from which they can reflect upon and expand their world views. More important, though, is the process, the experience of actually taking part in the composing and reification of a bit of knowledge, no matter how temporary that knowledge may prove to be. Just as important as the honing of their analytical skills is the empowering of developmental students with the means to become active participants in defining and challenging knowledge within a field of study.

Our endeavors to enable and empower developmental students warrant periodic review and at times reconstruction. For too often, as Rose (1983) points out, developmental college courses have little conceptual or practical relation to the larger academic community and its work. Too often, the developmental curriculum artificially and injuriously separates the inseparable activities of reading, writing, and thinking, activities mediated through language.

As our discussion has shown, these pedagogical and philosophical concerns are actually epistemological and political concerns, deeply rooted in conceptions of what it means to know and in how we come to agree on what we know. As our profession continues to grow in number, influence, and diversity of purpose, we would do well to continue

reexamining not just the pedagogical practices, but also the theoretical assumptions that our profession embraces and espouses. To that end, we encourage our colleagues to challenge and refine the assumptions presented here.

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Figure 1. Activities to encourage meaning-making

THEORETICAL CONSTRUCT	ACTIVITY	RESEARCH BASIS
Eliciting prior knowledge	Prediction guides	Nichols (1983)
	Survey, Question, Read, Recite, Review (SQ3R)	Robinson (1962)
	Preview, Read, Reflect, Recite, Review (PQ4R)	Thomas & Robinson (1977)
	Pre-Reading Plan (PReP)	Langer (1981)
	Node Acquisition and Integration Techniques (NAIT)	Diekhoff, Brown, & Dansereau (1982)
Constructing meaningful interconnections among parts of text	Networking	Dansereau (1978)
	Mapping	Boyle (1982)
	Clustering	Rico (1983)
Constructing & monitoring understanding	Underlining, highlighting, annotating	Nist (1987)
	Summarization	Brown, Campione, & Day (1981); Brown & Day (1983); Bretzing & Kulhavy (1979)
	Predict, Organize, Rehearse, Practice, & Evaluate (PORPE)	Simpson (1986); Simpson, Hayes, Stahl, Conner, & Weaver (in press)

Figure 2. Activities to encourage knowledge construction

THEORETICAL CONSTRUCT	ACTIVITY	RESEARCH BASIS
Participating in "inter-subjective negotiation"	Reader response transactions	Bleich (1975, 1978, 1986); Chase & Hynd (1987)
Participating in the socially interactive construction of knowledge	Collaborative learning	Berkenkotter (1984); Brannon & Knoblauch (1982); Bruffee (1972, 1978); Bruffee, Beck Hawkins, & Silver (1978); Elbow (1973, 1981); Gebhardt (1980); Trimbur (1983a, 1983b)
	Role playing, forensic discussion	Rubin & Dodd (1987)
Encouraging "dialectical thinking" & internalized conversation	Double-entry notebook	Berthoff (1981); Vogotsky (1962)